ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES
NEWS RELEASE

Cora Campbell, Commissioner
Jeff Regnart, Director

Contact:
Jeff Estensen, Fall Season Yukon Area Manager
Bonnie Borba, Fall Season Research Biologist
Phone: (907) 459-7274
Fax: (907) 459-7271

Upper Yukon Area Office
1300 College Road
Fairbanks, AK, 99701
Date Issued: November 23, 2012

2012 Yukon River Fall Season Summary

Introduction

This news release provides a preliminary summary of the 2012 Yukon Area fall season including fall chum and coho salmon harvests and escapement. All reported harvest and project results are preliminary and subject to revision.

2012 Fall Season Outlook

A formal fall chum salmon run forecast was made using brood year analysis. A preseason run projection was made in mid-July based on the historical relationship between summer and fall chum salmon run sizes. The 2012 fall chum salmon forecast was a point estimate of 1.1 million fish with a range of 986,000 to 1.2 million fish. The mid-July preseason projection was for a run size greater than 800,000 fish. The preliminary 2012 run size estimate of 1.0 million fall chum salmon is within the preseason forecast range.

Informal outlooks are made for coho salmon runs based on parent year escapement and assuming no changes in productivity. The 2012 coho salmon outlook was for a below average to average run based on the below average escapement in 2008. The preliminary 2012 run size estimate of 220,000 coho salmon was assessed as average.

Fall Season Overview

The fall season began by regulation on July 16 in lower river Districts 1 and 2 (Figure 1 shows the location of the Yukon Area management districts). Based on a preseason projection of greater than 800,000 fall chum salmon, all areas were returned to their regulatory subsistence fishing schedules commensurate with switching over to fall management based on timing of fish migrating up river. The schedules were as follows: commercial fishing continued in Districts 1 and 2 and subsistence fishing was open 7 days a week except for 12 hours before, during, and 12 hours after commercial openings. Since there were no commercial openings scheduled, District 3 went to a 7 day a week subsistence schedule on July 18. District 4 went to a 5 day per week

schedule, Subdistricts 5-A, 5-B, and 5-C continued on their regulatory schedule of two 48-hour periods per week, District 6 was on a two 42-hour periods per week regulatory schedule, and Subdistrict 5-D was returned to a 7 days per week schedule.

The first pulse of fall season chum salmon entered the Yukon River on July 16. Fall chum salmon continued to enter the Yukon River over four additional pulses through September 7. The pulses that entered through August 8 occurred regularly at a rate of about once a week (Figure 2 shows the daily passage of fall chum salmon past Pilot Station sonar). In between pulses, daily passage of fall chum salmon past Pilot Station sonar project were steady with numbers mostly above 3,000 fish. Run assessment indicated there was a surplus available for commercial harvest and regular commercial fishing periods were scheduled in both Districts 1 and 2. A lull in daily fall chum salmon passage occurred from August 9 through August 18. This coincided with hot (12-18°C), dry, and calm weather in the lower Yukon River drainage. No commercial fishing periods were scheduled in Districts 1 and 2 during this time. The fifth and largest pulse entered the Yukon River on August 16. From that point, run assessment continued to show a commercial surplus and regular commercial fishing periods in Districts 1 and 2 were scheduled throughout the remaining season. Commercial fishing periods were regularly scheduled in Subdistricts 4-A, 5-B, and 5-C from mid-August through early October, and in District 6 from September through early October. Finally, subsistence fishing was liberalized to 7 days a week, 24 hours a day on August 24 in District 4, on September 26 in Subdistricts 5-A, 5-B, and 5-C, and on September 28 in District 6.

The first pulse of coho salmon entered Yukon River on August 16 (Figure 3 shows the daily passage of coho salmon past Pilot Station sonar). There were two additional pulses of coho salmon through September 7. Pilot Station sonar passage estimates attributed to coho salmon were below average throughout the season. Coho salmon continued to enter Yukon River drainage after September 7 and were monitored at two lower river test fisheries but no additional pulses were observed.

Coho salmon were harvested incidentally in fall chum salmon directed commercial openings. Because of their high incidental commercial harvest, coupled with below average passage based on two test fisheries and Pilot Station sonar estimates, a coho salmon directed commercial fishery in the lower river in September was not prosecuted in 2012.

Commercial Fishing Summary

There were a total of 41 commercial periods during the fall season in 2012 (Table 1 provides a summary of the 2012 Yukon Area fall season commercial salmon harvest by district) with the majority of commercial harvest occurring in the lower river districts (a regular schedule of commercial fishing periods was established in Districts 4-6, but limited markets resulted in low fishing effort and relatively small harvests). The 2012 total commercial harvest for the Yukon River fall season in the Alaska portion of the drainage was 289,692 fall chum and 74,789 coho salmon. Both species harvested were above their respective most recent 5-year (2007–2011) and 10-year (2002–2011) averages (Table 2 shows historical commercial fall chum salmon harvest by district and Table 3 shows historical commercial coho salmon harvest by district). The fall chum salmon harvest was the largest since 1983 and the coho salmon harvest was the second largest since 1991. All salmon were sold in the round and no salmon roe was sold separately. The exvessel value of the total harvest was $1,955,855 (Table 4); $1,413,904 for fall chum and $541,951 for coho salmon. All values were above the most recent 5-year (2007–2011) averages.

A total of 469 individual permit holders participated in the 2012 fall chum and coho salmon fishery: 457 in Districts 1 and 2 combined and 12 in Districts 4, 5, and 6 combined (Table 5 shows how permit holder participation in 2012 compared to historical numbers).

Subsistence/Personal Use Fishing Summary

A comprehensive estimate of the 2012 subsistence harvest based on household surveys and permit harvest information for salmon and nonsalmon species is not available at this time, but is anticipated to be available by late spring of 2013. Subsistence and personal use harvests are expected to be similar to 2011 which were estimated to be approximately 80,000 fall chum salmon and 13,000 coho salmon.

Salmon Escapement

Total run size, based on an adjusted Pilot Station sonar abundance estimate and the addition of estimated commercial and average subsistence harvests downstream of the sonar site, (including test fisheries), was 970,000 fall chum salmon. Based on the location of the project, at river mile 123, the abundance estimate includes Koyukuk River drainage stocks which turn off at river mile 508.

Calculating total run size postseason is based on individually monitored spawning escapements (primarily above river mile 695), including estimated U.S. and Canadian harvests. Escapements were monitored in the Chandalar, Sheenjek, and the Canadian mainstem Yukon rivers using sonar and the Fishing Branch River with a weir. Assessment of Tanana River stocks is preliminary at this time and will eventually be based on either genetic apportionment of Pilot Station sonar estimates of chum salmon (both summer and fall Tanana River stocks passing after July 19) or the Delta River escapement and its relationship to the Tanana River mark-recapture estimates. In 2012, estimating run size based on the various projects resulted in a preliminary estimate of greater than 1.0 million fall chum salmon. Estimates of run size derived from individual projects are typically higher than those based on the sonar project at Pilot Station in part because of 1) apportionment of small stocks and 2) advancement of technologies used to enumerate fish in the upriver monitoring projects. The preliminary drainagewide escapement estimate of fall chum salmon is estimated to be greater than 680,000 fish which exceeds the upper end of the SEG range of 300,000 to 600,000 fish.

Fall chum salmon escapement into the Tanana River drainage is still being assessed, although it is anticipated goals will be met. The fall chum salmon escapement of 205,400 into Chandalar River exceeded the upper end of the BEG range of 74,000 to 152,000 fish, while the escapement of 73,000 fish on the right bank of the Sheenjek River was within the BEG range of 50,000 to 104,000 fish (total passage was estimated to be 104,700 with both banks; Table 6 showing historical escapements to selected spawning areas in the Yukon Area). The estimated escapement for the Fishing Branch River of 22,400 fall chum salmon was within the IMEG of 22,000–49,000 fish. The fall chum salmon escapement was estimated to be 137,000 fish for the mainstem Yukon River in Canada which exceeded the interim management escapement goal range of 70,000 to 104,000 fish and provided for harvest sharing agreement.

In 2012, the proportion of age-3 fish (1%) was below average, age-4 fish (78%) was above average (64%), age-5 fish (18%) was well below average (32%), and age-6 (3%) was above average based on samples collected at the Lower Yukon Test Fishery. Females contributed 55% to the samples and were near average (58%).

There are few coho salmon spawning escapement assessment projects in the Yukon River drainage because of funding limitations. The sonar at Pilot Station was operated a week longer than usual, through September 7 (since 2008), with an estimated passage of 106,800 coho salmon which is below the historical median of 135,600 fish (Table 7 showing historical escapements to selected spawning areas in the Yukon Area). The Delta Clearwater River (DCR) has the only established escapement goal for coho salmon, a SEG of 5,200–17,000 fish. A boat survey conducted in the Delta Clearwater River in late October observed slightly more than 5,200 coho salmon therefore the lower end of the goal was achieved. Fall season surveys for the Nenana and Kantishna river drainages, as well as the south bank of the Tanana River from Fairbanks to Delta Junction, were conducted recently but the data has yet to be summarized.

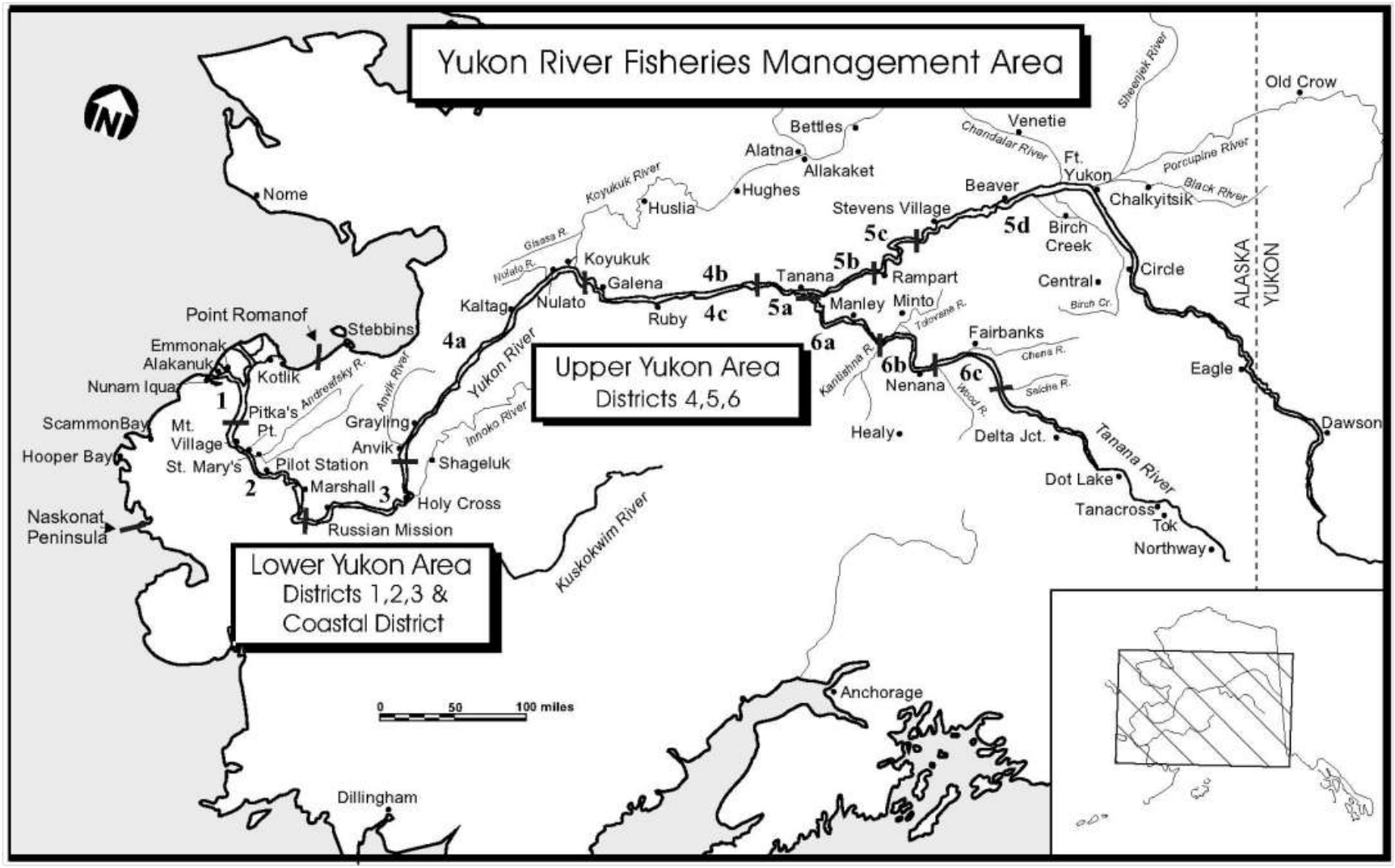

Figure 1.–Alaskan portion of the Yukon River drainage showing fishing districts and communities.

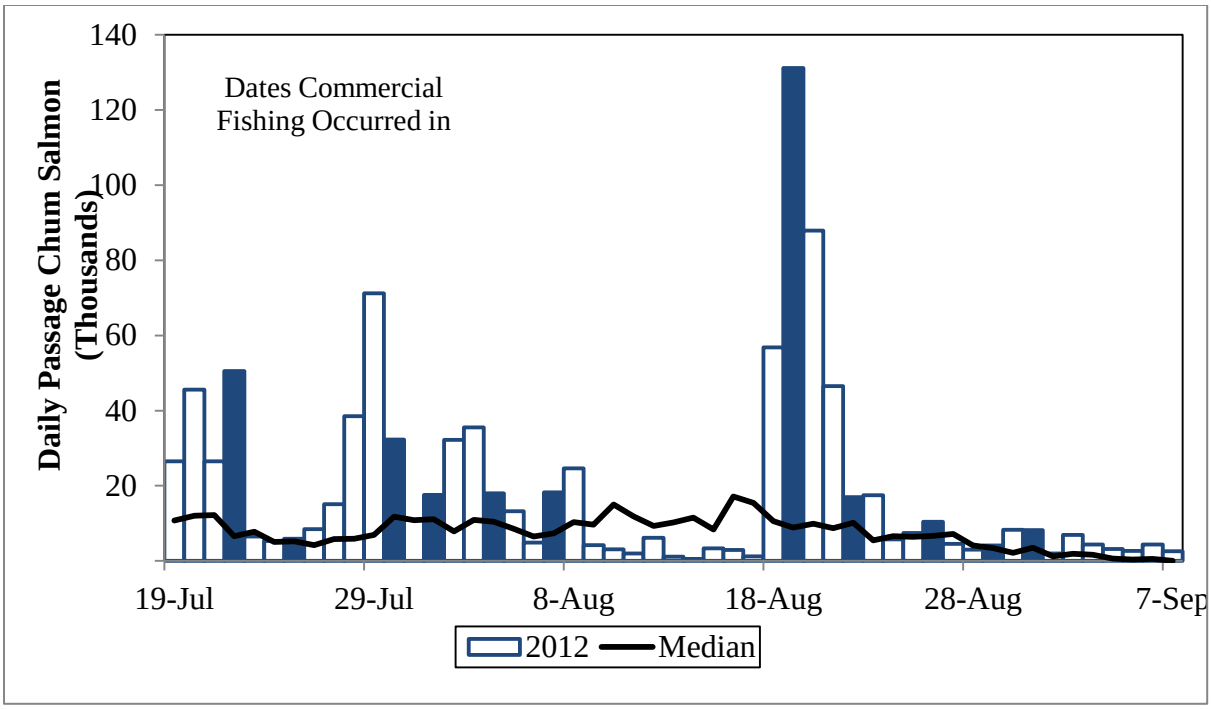

Figure 2.–Daily fall chum salmon passage counts, based on run reconstruction, at Pilot Station sonar in 2012 compared to historical average.

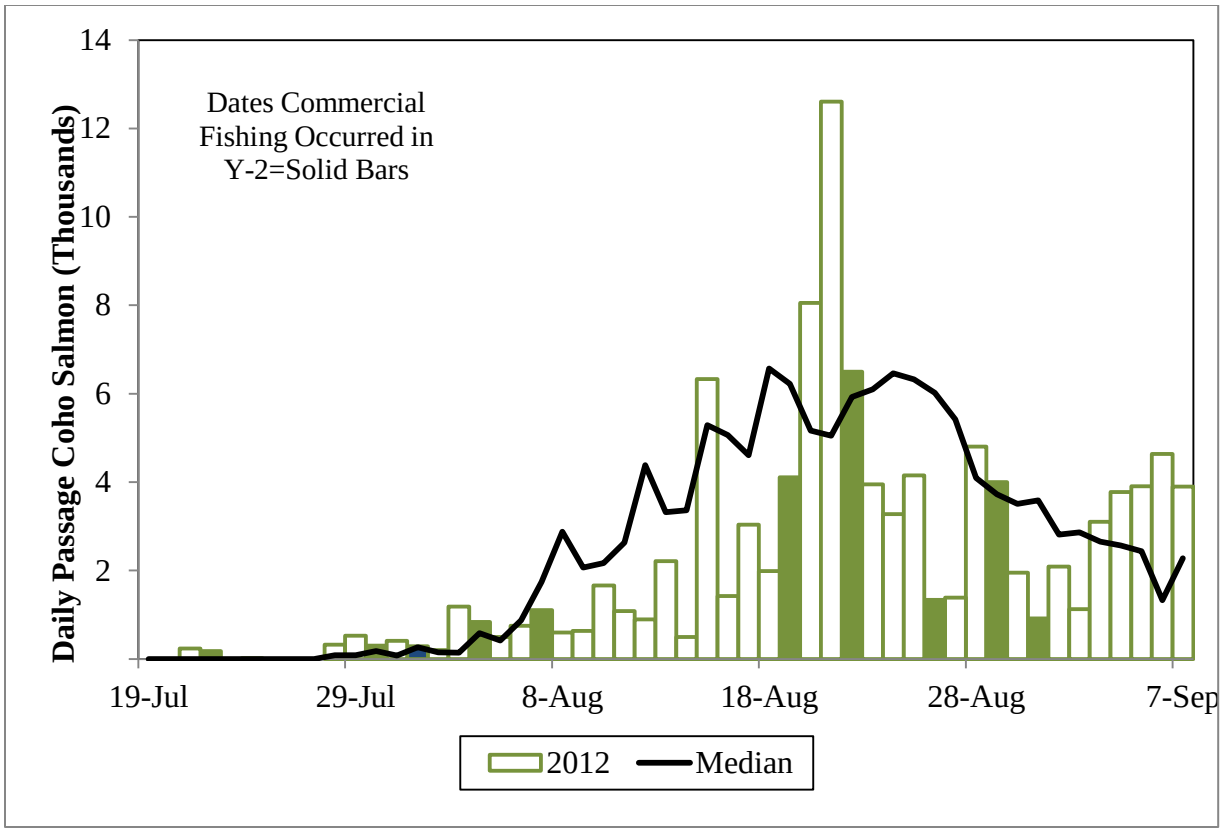

Figure 3.–Daily coho salmon Pilot Station sonar passage counts in 2012 compared to select years.

Table 1.–Preliminary fall season commercial salmon harvest, by district, Yukon Area, 2012.

			Fall Chum Salmon			Coho Salmon		
District	Periods	Permits	Number	Pounds	Average Weight [a]	Number	Pounds	Average Weight [a]
1	13	266	139,842	961,219	6.9	39,757	249,636	6.3
2	11	201	129,284	885,543	6.8	29,063	177,982	6.1
3			No commercial openings					
4[b]	8	4	811	5,205	6.4	0	0	N/A
5[c]	8	3	2,419	19,117	7.5	634	3,170	5.0
6	9	5	17,336	122,049	7.0	5,335	26,678	5.0
TOTAL	41	479	289,692	1,993,133	6.9	74,789	457,466	5.6

[a] Average weight is weighted based on individual periods.

[b] Commercial fishing occurred in Subdistrict 4-A.

[c] Commercial fishing occurred in Subdistricts 5-B and 5-C.

Table 2.–Fall chum salmon commercial harvest by district, Yukon River, 1992–2012.

	Lower Yukon				*Upper Yukon* [b]				Yukon
Year [a]	District 1	District 2	District 3	*Subtotal*	District 4	District 5	District 6	*Subtotal*	Total
1992	-	-	-	-	-	-	19,022	19,022	19,022
1993	-	-	-	-	-	-	-	-	-
1994	-	-	-	-	-	3,630	4,369	7,999	7,999
1995	79,345	90,831	-	170,176	8,731	30,033	74,117	112,881	283,057
1996	33,629	29,651	-	63,280	2,918	20,376	17,574	40,868	104,148
1997	27,483	24,326	-	51,809	2,458	3,640	-	6,098	57,907
1998	-	-	-	-	-	-	-	-	-
1999	9,987	9,703	-	19,690	681	-	-	681	20,371
2000	-	-	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-	-	-
2003	5,586	-	-	5,586	1,315	-	4,095	5,410	10,996
2004	660	-	-	660	-	-	3,450	3,450	4,110
2005	130,525	-	-	130,525	-	-	49,637	49,637	180,162
2006	101,254	39,905	-	141,159	-	1,667	23,353	25,020	166,179
2007	38,852	35,826	-	74,678	-	427	15,572	15,999	90,677
2008	67,704	41,270	-	108,974	-	4,556	5,967	10,523	119,497
2009	11,911	12,072	-	23,983	-	-	1,893	1,893	25,876
2010	545	270	-	815	-	-	1,735	1,735	2,550
2011	127,735	100,731	-	228,466	-	1,246	10,917	12,163	240,629
2012	139,842	129,284	-	269,126	811	2,419	17,336	20,566	289,692
Average 2007-2011									
	24,675	19,017	-	87,383	-	2,076	7,217	4,231	95,846

Note: Endash indicates no commercial fishing occurred.

[a] Number of fish harvested are based on reports from the State TIX and Zephyr programs.

[b] Estimated harvest is the number of fish sold in the round plus the estimated number of females to produce the roe sold.

Table 3.–Coho salmon commercial harvest by district, Yukon River, 1992–2012.

		Lower Yukon				*Upper Yukon* [b]				Yukon
Year	[a]	District 1	District 2	District 3	*Subtotal*	District 4	District 5	District 6	*Subtotal*	Total
1992		-	-	-	-	-	-	7,979	7,979	7,979
1993		-	-	-	-	-	-	-	-	-
1994		-	-	-	-	-	-	4,451	4,451	4,451
1995		21,625	18,488	-	40,113	0	-	6,900	6,900	47,013
1996		27,705	20,974	-	48,679	161	-	7,142	7,303	55,982
1997		21,450	13,056	-	34,506	814	-	-	814	35,320
1998		-	-	-	-	-	-	-	-	-
1999		855	746	-	1,601	-	-	-	-	1,601
2000		-	-	-	-	-	-	-	-	-
2001		-	-	-	-	-	-	-	-	-
2002		-	-	-	-	-	-	-	-	-
2003		9,757	-	-	9,757	-	-	15,119	15,119	24,876
2004		1,583	-	-	1,583	-	-	18,649	18,649	20,232
2005		36,533	-	-	36,533	-	-	21,778	21,778	58,311
2006		39,323	14,482	-	53,805	-	-	11,137	11,137	64,942
2007		21,720	21,487	-	43,207	-	-	1,368	1,368	44,575
2008		13,946	19,248	-	33,194	-	91	2,408	2,499	35,693
2009		5,992	1,577	-	7,569	-	-	742	742	8,311
2010		1,027	1,023	-	2,050	-	-	1,700	1,700	3,750
2011		45,335	24,184	-	69,519	-	-	7,502	7,502	77,021
2012		39,757	29,063	-	68,820	0	634	5,335	5,969	74,789
Average 2007–2011		17,604	13,504	-	31,108	-	91	1,960	1,973	33,870

Note: Endash indicates no commercial fishing occurred.

[a] Numbers of fish harvested are based on reports from the State TIX and Zephyr programs.

[b] Estimated harvest is the number of fish sold in the round plus the estimated number of females to produce the roe sold.

Table 4.–Exvessel value of fall chum and coho salmon commercial salmon fishery, 1992–2012.

	Fall Chum					Coho						Value by Species		Value by Area		
	Lower Yukon		Upper Yukon			Lower Yukon			Upper Yukon							
Year	$/lb	Value	$/lb	$/lb Roe	Value	$/lb	$/lb Roe	Value	$/lb	$/lb Roe	Value	Fall Chum	Coho	Lower	Upper	Total
1992	-	-	0.39	4.50	54,161	-		-	0.39	2.18	19,529	54,161	19,529	-	73,690	73,690
1993	-	-	-		-	-		-	-		-	-	-	-	-	-
1994	-	-	0.16	1.50	8,517	-		-	0.48	1.50	8,739	-	8,739	-	17,256	17,256
1995	0.15	185,036	0.13	2.96	167,571	0.29		80,019	0.14	2.51	11,292	352,607	91,311	265,055	178,863	443,918
1996	0.10	48,579	0.13	1.71	45,438	0.26	2.96	96,795	0.09	2.16	13,020	94,017	109,815	145,374	58,458	203,832
1997	0.22	86,526	0.17	1.75	7,252	0.32		79,973	0.20		1,062	93,778	81,035	166,499	8,314	174,813
1998	-	-	-		-	-		-	-		-	-	-	-	-	-
1999	0.25	35,639	0.20		876	0.35		3,620	-		-	36,515	-	39,259	876	40,135
2000	-	-	-		-	-		-	-		-	-	-	-	-	-
2001	-	-	-		-	-		-	-		-	-	-	-	-	-
2002	-	-	-		-	-		-	-		-	-	-	-	-	-
2003	0.15	5,993	0.10		3,398	0.25		18,168	0.05		5,095	9,391	23,263	24,161	8,493	32,654
2004	0.25	1,126	0.05		848	0.25		2,774	0.06		6,372	1,974	9,146	3,900	7,220	11,120
2005	0.32	316,698	0.14		48,159	0.32		83,793	0.12		19,182	364,857	102,975	400,491	67,341	467,832
2006	0.20	202,637	0.14		33,806	0.20		50,299	0.19		11,137	236,443	61,436	252,936	44,943	297,879
2007	0.27	144,256	0.20		16,907	0.39		127,869	0.20		1,368	161,163	129,237	272,125	18,275	290,400
2008	0.55	428,969	0.27		22,089	0.97		216,777	0.20		3,717	451,058	220,494	645,746	25,806	671,552
2009	0.70	108,778	0.19		1,286	1.00		52,176	0.15		457	110,064	52,633	160,954	1,743	162,697
2010	1.00	5,428	0.23		2,761	1.50		20,535	0.26		442	8,189	20,977	25,963	3,203	29,166
2011	1.00	1,627,575	0.22		16,114	1.00		472,168	0.15		6,792	1,643,689	478,960	2,099,743	22,906	2,122,649
2012	0.75	1,385,550	0.22		28,354	1.25		534,523	0.22		7,428	1,413,904	541,951	1,920,073	35,782	1,955,855
Avg 2007-2011	0.70	151,736	0.17		16,157	0.61		71,549	0.15		5,971	167,892	77,520	223,285	22,128	245,413

Table 5.–Number of permit holders, by district, participating in the Yukon River fall season commercial salmon fisheries, 1992–2012.

	Lower Yukon Area				Upper Yukon Area				Yukon Area
Year	District 1	District 2	District 3	Subtotal [b]	District 4	District 5	District 6	Subtotal [c]	Total
1992	0	0	0	0	0	0	22	22	22
1993	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	-	-	11	11	12
1995	189	172	0	361	4	12	20	36	397
1996	158	109	0	263	-	17	-	17	280
1997	176	130	0	304	3	8	0	11	315
1998	0	0	0	0	0	0	0	0	0
1999	146	110	0	254	4	0	0	4	258
2000	0	0	0	0	0	0	0	0	0
2001	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0
2003	75	0	0	75	-	-	5	5	80
2004	26	0	0	26	0	0	6	6	32
2005	177	0	0	177	0	0	7	7	184
2006	219	71	0	286	0	4	11	15	301
2007	181	122	0	300	-	-	8	8	308
2008	251	177	0	428	0	3	8	11	439
2009	165	130	0	292	-	-	-	-	292
2010	72	18	0	90	0	0	4	4	94
2011	234	169	0	395	-	-	-	7	402
2012	266	201	-	457	4	3	5	12	469
Average									
1971-2012	232	129	8	361	11	17	16	40	397
2003-2012	167	89	0	253	1	2	7	8	260
2008-2012	198	139	0	332	1	2	6	9	339

Note: Endash indicates fewer than three commercial permits were fished during the season and are confidential.

[a] Number of permit holders which made at least one delivery.

[b] The Lower Yukon Area Subtotal is the unique number of permits fished in Districts 1, 2, and 3 as fishermen may transfer between districts during the season.

[c] The sum of Districts 4, 5, and 6 averages may not equal Upper Yukon Area district Subtotal due to rounding error.

Table 6.–Fall chum salmon passage estimates or escapement estimates for selected spawning areas, Yukon River drainage, 1992 to 2012.

	Alaska								Canada	
		Tanana River Drainage			Upper Yukon River Drainage					
Year	Yukon River Mainstem Sonar Estimate	Delta River [a]	Bluff Cabin Slough [b]	Tanana River Estimate [c]	Chandalar River [d]	Sheenjek River [e]		Fishing Branch River [f]	Mainstem Escapement Estimate [g]	
1992		8,893	3,615	[i]		78,808		22,539	49,082	
1993		19,857 [h]	5,550	[i]		42,922		28,707	29,743	
1994		23,777	2,277	[i]		150,565		65,247	98,358	
1995	1,053,248	20,587 [h]	19,460	230,643	280,999	241,855		51,971 [j]	158,092	
1996		19,758	7,074	132,922	208,170	246,889		77,302	122,429	
1997	506,621	7,705	5,707	88,641	199,874	80,423	[k]	27,031	85,419	
1998	372,927	7,804	3,549	82,475	75,811	33,058	[l]	13,687	46,252	
1999	379,493	16,534	7,037	109,309	88,662	14,229		12,958	58,552	
2000	247,935	3,001	1,595	55,983	65,894	30,084	[m]	5,057	53,732	
2001	376,182	8,103	1,808 [i]	116,012	110,971	53,932		21,737	33,491	
2002	326,858	11,992	3,116	163,421	89,850	31,642		13,600	98,679	
2003	889,778	22,582	10,600 [i]	263,302	214,416	44,047	[n]	29,713	143,133	
2004	594,060	25,073	10,270 [i]	187,409	136,706	37,878		20,417	154,080	
2005	1,813,589	28,132	11,964 [i]	372,758	496,484	561,863	[o]	119,058	437,733	
2006	790,563	14,055		233,193	245,090	160,178	[o]	30,954	211,994	
2007	684,011	18,610		357,016	228,056	65,435	[o]	32,150	254,649	
2008	615,127	23,055	1,198	264,200 [p]	178,278	50,353	[o]	19,086	174,267	[q]
2009	233,169 [r]	13,492	2,900 [i]	159,828 [p]	150,000 [s]	54,126	[o]	25,828	93,626	[q]
2010	393,326	17,993	1,610 [i]	212,660 [p]	157,998	22,053		15,440	117,871	[q]
2011	764,194	23,639	2,655 [i]	270,846 [p]	295,335	97,976	[o]	13,085	205,617	[q]
2012 [t]	682,871				205,404	104,701	[o]	22,399	137,286	[q]
All Years Average	655,674 [r]	14,556	5,446	194,154	161,789	91,598		51,222	104,454	
5 Year Average 2007–2011	614,165 [r]	19,358	2,091	252,910	201,933	57,989		21,118	169,206	
BEG Range	300,000 [u]	6,000		61,000	74,000	50,000		50,000	> 80,000	[v]
	600,000	13,000		136,000	152,000	104,000		120,000		
Interim Escapement Objective								22,000-49,000 [w]	70,000-104,000	[x]

-continued-

Table 6.–Page 2 of 2.

[a] Population estimate generated from replicate foot surveys and stream life data using AUC (area-under-curve) method unless otherwise indicated.
[b] Peak counts from foot surveys unless otherwise noted.
[c] Fall chum salmon passage estimate based on mark-recapture projects operated from 1995–2007 on the upper Tanana River and from 1999–2007 on the Kantishna River minus harvests.
[d] Single beam sonar estimate (1986–1990), split beam sonar estimate (1995 to 2006). DIDSON sonar (2007–present).
[e] Single beam sonar estimate (1981–2002), split beam sonar estimate (2003-2004), DIDSON sonar (2005-present). Since 1991 project started between August 8–10.
[f] Located within the Canadian portion of the Porcupine River drainage. Weir count, unless otherwise indicated. Late season adjustments have been made for the period when weir was not operating for most years.
[g] Estimated mainstem Yukon River Canadian escapement derived from mark-recapture project minus Canadian mainstem harvest and excluding Canadian Porcupine River drainage escapement, unless otherwise noted.
[h] Total escapement estimate generated from the migratory time density curve method.
[i] Peak aerial survey counts.
[j] Minimal count because weir was closed while submerged due to high water, during the period August 31 to September 8, 1995.
[k] The passage estimate includes an additional 15,134 salmon that were estimated to have passed during 127 hours that the sonar was inoperable due to high water from August 29 until September 3, 1997.
[l] Total abundance estimates are for the approximate period August 17 through the last week of September.
[m] Project ended early, sonar passage estimate was 18,652 (62% of normal run timing). The total sonar passage estimate, 30,083, was expanded to reflect the 1986–1999 average run timing through September 24.
[n] Project ended on peak daily passage due to late run timing, estimate was expanded based on run timing (87%) at Rapids.
[o] BEG based on right bank only. Inseason right bank counts include 266,963, 106,397, 39,548, 35,912, 28,480, 49,080, and 57,823 in 2005 through 2009 and 2011 to 2012 respectively.
[p] Tanana River estimate for 2008–2011 is based on regression of Delta River 1995–2006 with estimate for Tanana River (Kantishna 1999–2007 and Upper Tanana 1995–2007 based on mark–recaputure).
[q] Estimated mainstem Yukon River Canadian escapement is derived from Eagle sonar estimate (2008 to present) minus harvest from Eagle community upstream including Canadian harvests.
[r] Excludes 2009 because of problems with apportionment during extremely low water operations.
[s] Project ended early, estimate based on regression of Chandalar to Fishing Branch River plus Mainstem Yukon River Border from 1995–2009.
[t] Preliminary data.
[u] Yukon River drainagewide sustainable escapement goal is assessed insearon using Pilot Station sonar estimates minus upstream estimated harvests. Post season run reconstruction using harvest and escapements is used to measure whether the goal was achieved.
[v] The escapement goal after rebuilding is greater than 80,000 fish.
[w] Interim Management Escapement Goal (IMEG) established 2008. Based on Bue and Hasbrock SEG method.
[x] IMEG of 70,000 to 104,000 was established for 2010 to present is based on Canadian stock Ricker model which was to be reviewed after the 2005 returns were completed.

Table 7.–Coho salmon passage estimates or escapement estimates for selected spawning areas, Yukon River drainage, 1992 to 2012.

		Nenana River Drainage							
Year	Yukon River Mainstem Sonar Estimate [a]	Lost Slough	Nenana Mainstem [b]	Wood Creek	Seventeen Slough	Lignite Springs [c]	Delta Clearwater River [d]	Clearwater Lake and Outlet	Richardson Clearwater River [e]
1992		372			490		3,963	229 [f]	500
1993		484	419	666 [g, h]	581		10,875	3,525 [f]	
1994		944	1,648	1,317 [g, i]	2,909	244	62,675	3,425 [f]	5,800
1995	100,664	4,169	2,218	500 [g]	2,972 [e]		20,100	3,625 [f]	
1996		2,040	2,171	201 [j, k]	3,666 [f]	282	14,075	1,125 [j]	
1997	105,956	1,524 [l]	1,446	[m]	1,996	50 [g]	11,525	2,775 [f]	
1998	129,076	1,360 [j]	2,771 [j]	370	1,413 [n]	175 [g]	11,100	2,775 [f]	
1999	60,886	1,002 [j]	745 [j]	[m]	662 [j]		10,975		
2000	169,392	55 [e,j]	68 [e, j]	[m]	879 [e, j]	95	9,225	1,025 [f]	2,175
2001	132,283	242	859	699	3,753	135	46,875	4,425 [f]	1,531
2002	117,908	0	328	935	1,910	130	38,625	5,900 [f]	874
2003	265,119	85	658	3,055	4,535	67	105,850	8,800	6,232
2004	199,884	220	450	840	3,370		37,950	2,925	8,626
2005	184,071	430	325 [j]	1,030	3,890		34,293	2,100	2,024
2006	131,919	194	160 [j]	634	1,916		16,748	4,375 [f]	271
2007	173,289	63	520	605	1,733	334	14,650	2,075 [f]	553
2008	135,570	1,342	1,539	578	1,652		7,500	1,275	265
2009	206,620 [o]	410		470	680		16,850	5,450	155
2010	155,784	1,110	280	340	720		5,867	813	1,002
2011	127,931	369			912		6,180		
2012 [p]	106,793				405		5,230		
All Years Average	143,533 [o]	852	966	1,392	1,517	168	16,366	2,214	1,330
5 Year Average 2007-2011	148,144 [o]	659	780	498	1,139	-	10,209	2,403	494
SEG							5,200 to 17,000 [q]		

-continued-

Table 7.–Page 2 of 2.

Note: Last table revision November 06, 2012. Only peak counts presented. Survey rating is fair to good, unless otherwise noted.

[a] Passage estimates for coho salmon are incomplete. The sonar project is terminated in most years prior to the end of the coho salmon run.

[b] Mainstem Nenana River between confluences of Lost Slough and Teklanika River.

[c] Foot survey, unless otherwise indicated.

[d] Boat survey counts in the lower 17.5 river miles, unless otherwise indicated.

[e] Aerial survey, fixed winged or helicopter.

[f] Boat Survey.

[g] Weir count.

[h] Weir project terminated on October 4, 1993. Weir normally operated until mid to late October.

[i] Weir project terminated September 27, 1994. Weir normally operated until mid-October.

[j] Poor survey.

[k] Beginning at confluence of Clear Creek, the survey includes counts of both Glacier and Wood Creeks to their headwaters.

[l] Survey of western floodplain only.

[m] No survey of Wood Creek due to obstructions in creek.

[n] Combination foot and boat survey.

[o] Excludes 2009 because of problems with apportionment during extremely low water operations.

[p] Preliminary data.

[q] Sustainable escapement goal established in 2004, based on boat survey counts of coho salmon in the lower 17.5 river miles conducted during the period October 21 through 27.